Rhodora

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JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

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NOTES ON THE UMBELLIFERAE OF NEW ENGLAND.

WALTER DEANE.

AFTER a lapse of just two years since the publication of the Preliminary List of New England Plants,— II. Umbelliferae (RHODORA, I, pp. 159–160), I have endeavored to revise the list and bring the corrections and additions to date. The genera are arranged, as before, alphabetically.

Berula angustifolia, Mert. & Koch. The authority for this species was wrongly ascribed to Koch.

Bifora radians, Bieb. By a typographical error the generic name was misspelled in my list.

Coelopleurum actaeifolium, Coulter & Rose. The *Coelopleurum* of Eastern North America must now be referred to this species. *C. Gmelini*, Ledeb., is confined to Alaska. Our New England plant was first described by Michaux, Fl. Bor. Am. I, 1803, p. 166, as *Ligusticum actaeifolium* (see North American Umbelliferae, Coulter & Rose, Washington, 1900, p. 142).

Conium maculatum, L. I have seen in the Gray Herbarium a specimen of this species collected by Mr. A. W. Driggs, in East Hartford, Connecticut, on June 26, 1899. A cross should be placed against this in my list.

Coriandrum sativum, L. Professor E. S. Burgess collected this species at Cottage City, Martha's Vineyard, Massachusetts, in August, 1893. Through the kindness of Dr. J. N. Rose I have been enabled to see one of Prof. Burgess's specimens deposited in the National Museum Herbarium in Washington. On the label I read, "Occasionally escaped from cultivation by the Portuguese." It should be represented in my list by a cross and I enter it as it is desirable to make a record of escapes which may become more or less established.

Crantzia lineata, Nutt. Mr. A. A. Eaton (Rhodora, II, p. 168) reports this species from Exeter and Newmarket, New Hampshire. He has kindly sent me specimens from the latter place, taken in August, 1899. A cross should represent this in my list.

Eryngium amethystinum, L. Judge J. R. Churchill found this species abundant in one locality in waste ground at the head of the beach, at Nahant, Massachusetts, on July 29, 1899. I have seen specimens from this locality in his herbarium, and I think it is worth while to record such escapes in view of their future behavior. It should be entered with a cross in my list.

Eryngium yuccifolium, Michx. This name should take the place of *E. aquaticum*, L. which has proved, through recent investigations, to be *E. virginianum*, Lam. (Britten & Baker, Jour. Bot. XXXVIII, 1900, p. 243.)

Foeniculum vulgare, Gaertn. Mr. Hubert Lyman Clark of Olivet College, Olivet, Michigan, has recorded in Rhodora, III, 1901, p. 88, his finding of the Fennel at Woods Hole, Massachusetts in 1899 and 1900. He did not preserve any specimens. Mr. Clark writes me under date of April 13 last, "The *Foeniculum* admitted of no doubts so I did not press any. I found it the last of July, 1899 and the 24th of July, 1900, at the same spot, but I can give you no further information about it, except that it was growing with other adventitious plants on a dump." A line under Massachusetts should be placed against this name in my list.

Hydrocotyle umbellata, L. I have seen in the Herbarium of the New England Botanical Club a specimen of this species from Oxford, Connecticut, collected in September, 1885, by Mr. E. B. Harger, and recorded in Rhodora, II, p. 125. A cross should represent this in my list.

Ligusticum scothicum, L. By a typographical error this genus was referred to *Levisticum* in my list. The specific name should retain the letter "h", as found in L., Sp. Pl., I, 1753, p. 250.

Pimpinella Anisum, L. This species was wrongly ascribed in my list to Willdenow.

Sanicula canadensis, L. In Rhodora, II, p. 168, Mr. A. A. Eaton records this species from Seabrook and Kensington, New Hampshire among deciduous trees. He has kindly sent me a specimen from the Kensington locality collected by him in 1898, and I am glad to place a cross against the species in my list.

Sanicula gregaria, Bicknell. This species was collected in New Hampshire on the wooded banks of the Connecticut River, at Walpole on August 2, 1899, by Mr. M. L. Fernald. I have seen his specimens in the Gray Herbarium, and a cross should represent this in my list.

Sanicula trifoliata, Bicknell. This species was collected at Manchester, Maine, by Prof. F. Lamson-Scribner as early as 1873. A specimen is in the New England Botanical Club Herbarium where I have examined it. It has also been taken at Alstead, New Hampshire, by Mr. Fernald in 1899. I have seen a specimen from this locality and the two States should each be represented by a cross in my list.

Sium Carsonii, Durand. The more I see of this plant the more I am convinced that it is only an aquatic variety or mere form or state of *cicutaefolium*. The peculiar nondescript character of the leaves and entire plant in its extreme immersed form tends to this conclusion, and I have in my herbarium a series of specimens showing a complete gradation from the typical *cicutaefolium* to the typical *Carsonii*. The immersed form fruits much less frequently and, as is natural, the fruit is somewhat reduced but its size seems to depend upon the degree of immersion of the plant. The amount of variation in the shape of the leaves from *cicutaefolium* also depends upon the degree of immersion, and it all tends to show, to my mind, that *Carsonii* has been evolved from *cicutaefolium* and is certainly no more than a variety of it, as intermediate forms exist in abundance to show this connection.

Taenidia integerrima, Drude. This name should take the place of *Pimpinella integerrima*, Gray. Our native species has proved, according to the opinion of recent monographers, to be generically distinct from the old world *Pimpinella*.

Thaspium aureum, Nutt. (*Thaspium trifoliatum aureum* Britton). This species is credited to New England in the Monograph of the North American Umbelliferae, Coulter and Rose, Washington, 1900, p. 146, and to Rhode Island in Britton and Brown's Illustrated Flora, II, 1897, p. 518. Professor Coulter, Dr. Rose and Dr. Britton have kindly furnished me with information as to their authority for these statements. The reference to New England is either a mistake or it was based on tradition, and was made from previous records, as no specimens from New England have ever been seen by the authors of

either work. These records are readily traced to the Gray Manual, 6th edition, where the range is given as, "throughout the Atlantic States" etc. Now in the Revision of the North American Umbelliferae, Coulter and Rose, published in 1888, it is very clearly shown, on page 82, that great confusion has existed in regard to the species of *Thaspium* and that most herbarium specimens labelled *Thaspium aureum*, belong to the apterous fruited plants now included in the genus *Zizia*. There is not the slightest doubt that in this way *Thaspium aureum* was included in the Gray Manual, and this range has been copied into many of our local floras.

Dr. Britton has seen no New England *Thaspium aureum*, and his reference to Rhode Island is based upon "Plants of Rhode Island," J. L. Bennett, Providence, 1888, in which both *Thaspium aureum* and the variety *atropurpureum* are credited to the State. Bennett's statement as to the occurrence of the species in Rhode Island is doubtless based upon the same misconception, for no specimens from the State exist in the Herbarium of Brown University or in any private herbaria that I can find. I have examined a great many plants of so-called *Thaspium aureum* and of *Zizia aurea* from over New England with the kind assistance of Dr. Rose and every plant has turned out to be the latter species, *Zizia aurea*. For years past I have tried without success to see a New England *Thaspium aureum* either in the field or in an herbarium, and I feel very safe in saying that as far as we know at present the species does not grow with us. I trust that no future list will include this species as a New England plant unless an authentic specimen exists to prove the statement. I have spoken thus at length upon this subject as I think it is important to have a clear understanding as to the position of this species in New England, and I hope that it will stimulate an active search for *Thaspium aureum*, especially in the southern and western borders of our States.

Thaspium aureum, var. *atropurpureum*, Coulter & Rose. This form should stand as the earliest correct combination under the genus *Thaspium*, instead of *Thaspium atropurpureum*, Nutt. The sole authority for this variety as a New England plant is Bennett's Plants of Rhode Island, referred to above, where the plant is credited to "Warwick, Olney." As no trace of Olney's specimen can be found, if indeed it ever existed, and as the most diligent search of New England botanists has never brought this variety to light either before or since

Mr. Bennett's publication, I propose to drop the name from my list until actual specimens exist to prove its presence here.

Zizia aurea, var. *obtusifolia*, Bissell. This form was discovered by Mr. C. H. Bissell in Salisbury, Connecticut, on June 18, 1900, and published in RHODORA, II, p. 225. The type specimen is deposited in the Gray Hebarium where I have examined it. It should be entered with a cross in my list.

CAMBRIDGE, MASSACHUSETTS.

A SOCIETY FOR THE PROTECTION OF NATIVE PLANTS.

IN Boston and its suburbs a number of persons who take a keen interest in wild flowers have united to form a "Society for the Protection of Native Plants." The object of this society is to check the wholesale destruction to which many of our native plants are exposed, — a destruction often a matter of pure thoughtlessness in the excessive picking of flowers, and unnecessary pulling of roots, or an extensive collecting of flowers and plants for sale.

It is the intention of the society to publish brief articles, or leaflets, calling the attention of thoughtful people to the matter, and to point out what plants especially need protection and in what way the desired end may be best affected. These leaflets will be distributed to teachers in our schools, to flower missions and village improvement societies, and in such other places as it may seem that they will be effective.

This movement for the protection of native plants has the approval of the New England Botanical Club, which, as a body, feels keenly the loss or great reduction of many plants once more or less abundant in the neighborhood of our large cities.

For information in regard to the Society for the Protection of Native Plants, or its leaflets, application may be made to

MISS MARIA E. CARTER, Curator of Herbarium, Boston Society of Natural History, BERKELEY STREET, BOSTON, MASS.

PRELIMINARY LISTS OF NEW ENGLAND PLANTS

VII,[1]— BORAGINACEAE.

Edward B. Chamberlain.

[The sign + indicates that an herbarium specimen has been seen; the sign — that a printed record has been found.]

	Me.	N. H.	Vt.	Mass.	R. I.	Conn.
Amsinckia lycopsoides, Lehm.				+		+
Asperugo procumbens, L.				+		
Cynoglossum officinale, L.	—	—	+	+	+	+
" virginicum, L.	+	+	—	—		—
Echium vulgare, L.	+	+	+	+	+	+
Echinospermum Lappula, Lehm.	+	—	+	+		—
" Redowskii, var. occidentale, Wats.	+					
" Virginicum, Lehm.	—	+	—	+	—	+
Lithospermum arvense, L.	+	—	—	+	+	+
" officinale, L.	+	+	+	+	—	+
Lycopsis arvensis, L.	+			+	+	—
Mertensia maritima, S. F. Gray.	+	—		+		
Myosotis arvensis, Lam.	+		—	+	+	
" collina, Hoffm.				+		
" laxa, Lehm.	+	—	+	+	+	+
" palustris, Lam.			+	+	—	+
" verna, Nutt.	+	—	+	+	+	+
Onosmodium virginianum, DC.				+	+	+
Symphytum officinale, L.	+	+	—	+	+	+
" asperrimum, Sims.	+			—		

Notes upon the above list.

The *Amsinckia intermedia*, Fisch. & Mey., reported in the Flora Middlesex Co., Mass., as introduced around woolen mills, appears to be *A. lycopsoides*, Lehm.

Anchusa officinalis, L. has been found upon a dump at Providence, R. I., by Mr. J. F. Collins; there are specimens in Mr. Collins' herbarium, and in that of the New England Botanical Club.

[1] Printed in Rhodora as supplementary material.

Borago officinalis, L. A single collection of this plant at Lowell, Mass., in 1848 is recorded in the Flora Middlesex Co., Mass.; the specimen, in Herb. Bost. Soc. Nat. Hist., has not been seen.

Heliotropium curassavicum, L. was collected in 1897 by Mr. J. C. Parlin at No. Berwick, Me., in sandy soil made saline by the waste from a pickle factory; *H. europaeum*, L. is reported from Cambridge and Westford, Mass.; *H. indicum*, L. has been found at Cambridge, Mass., by Mr. Walter Deane.

Krynitzkia californica, Gray. (*Allocarya californica*, Greene.) A specimen of this plant (ticketed *Eritrichium oxycaryum*, Gray) is in the Herb. N. E. Bot. Club from wool waste at N. Chelmsford, Mass. (See Flora Middlesex Co. p. 75). The plant has also been found in similar situations at No. Berwick, Me., by Mr. J. C. Parlin.

Lithospermum angustifolium, Mx., and *Mertensia virginica*, DC., were introduced at Concord, Mass., by Mr. Minott Pratt, but have not persisted. (See Flora Middlesex Co. p. 76; and Rhod. 1 : 168.)

Myosotis collina, Hoffm. The plant from York Co., Me., reported as this species in Rhod. 1 : 76., proves to be *M. verna*, Nutt. *Myosotis collina* (*M. hispida*, Schlecht.) has blue flowers, the fruiting calyx about 2 mm. long with hooked pubescence and merely equalling the straight spreading pedicels. The plant is from 3–6 inches high, with spatulate or oblanceolate, hairy leaves which are clustered at the base of the stem. When in mature fruit the raceme is bractless, and much longer than the leafy part of the stem.

Onosmodium virginianum, DC. This plant appears to reach its northern limit, in New England, at about the southern boundary of Massachusetts. To the writer's knowledge the most northern station thus far reported is at Monson, Mass. (lat. 42° 5′–10′), given in Tuckerman & Frost, Catl. Pl. within 30 m. Amherst, (1875). Specimens have been seen from the following stations: Mass.; Centerville, Nantucket Id.: R. I.; Cranston, Providence, Smithfield: Conn.; New Haven, Fairfield. The plant has been reported also from New Bedford, Mass., and Southbury, Conn. Further information regarding its distribution is much desired.

Providence, Rhode Island.

HOTTONIA INFLATA: IN AMESBURY MASSACHUSETTS. DOES IT OCCUR FARTHER NORTH? — I wish to ask through RHODORA for information as to the northern limit of *Hottonia inflata*. The range given in Britton and Brown's Flora is Massachusetts to central New York and south to Florida. As there is a colony of this plant growing in a pool here in Amesbury it seems likely that this station must be about the northern limit. Can any one inform me if it occurs farther north?

On the muddy banks of the same pool I have collected the interesting little moss *Bruchia Drummondii*, considered to be a southern species, I believe. — J. W. HUNTINGTON, Amesbury, Mass.

AERIAL RUNNERS IN TRIENTALIS AMERICANA.

ROBINA SILSBEE SMITH.

(Plate 34.)

THOSE acquainted with the Trientalis and with its life under ground are familiar with its slender white tuberiferous runners one or two feet in length. It is of great interest in the dry days of late summer to lift off the deep covering of moss and disclose this outcome of the summer's work with the well-developed tuber (fig. 3, f) already rooted in the ground. The protective bend of the bud is especially marked and at intervals along the runners are minute scales (fig. 3, e) similar in nature to those more developed on the upright stem (fig. 1, b). As the white runners thread the moss a touch of rose-color here and there shows where they have run nearer to the surface and felt the influence of the sun. These traces of color suggest in a novel way the stem-nature of the underground runners.

Some years ago, in late summer, at Machias, Washington Co., Maine, a few peculiar specimens of the Trientalis were found. From the axils of the leaf-like scales (fig. 2, g fig. 1, h) were produced slender aërial runners (fig. 2, c). They were of a deep carmine color, and an unusual coloring of the leaves suggested some injury or blight. These plants showed no sign of blossoms except in cases where blossoms had not perfected fruit (fig. 2, d). These aërial runners, as they dip into the moss, form tubers similar to the

usual subterranean ones. Ordinary plants of Trientalis at this season show very long underground runners and well developed tubers (fig. 3, f) but these plants for some reason seem to have put their strength into these runners above ground and the growth beneath the moss is such as in fig. 1, a.

These odd plants grew at the base of an evergreen covered ledge, on the north side, on the outskirts of a sphagnum swamp and amid a growth favoring sedges, Nabalus, flag and creeping snowberry.

They have continued to hold their own in that one spot, changing only from the mossy base of one tree to that of another. This place is just on the border line where the "old growth" type of vegetation meets the tangle of a sunny second-growth.

I have been constantly on the watch for another locality where Trientalis could be found growing thus, and two or three years ago found a couple of similar plants on the north slope of an adjacent ledge where a tangle of raspberry and Aralia was covering the demolition of the old growth. I have never seen them any where else.

Sometimes the graceful runners are swinging free, sometimes they have just penetrated the moss enough for the tuber to form (fig. 1, j). Last summer (1900) after the extreme drought I was unable to find a specimen in the old place for a long time, but one plant finally appeared with a well developed tuber and the same characteristics as in previous years.

Fig. 4 is a portion of an aërial runner where branch-runners appear to be starting.

I was once attracted to what appeared to be a similar condition of growth in Trientalis but it proved to be another interesting phase of life. A couple of these plants were growing on the moss covering of an old fence log. When the white underground runners reached the perpendicular end of the log and lost the covering of moss, they assumed the rich color of the aërial runners and swung out free over the edge instead of following out the root instinct and seeking the dark again. Here again the pink spots on the white runners showed at intervals the effect of the light.

Cambridge, Massachusetts.

FURTHER NOTES ON RHADINOCLADIA.

R. E. Schuh.

In Rhodora, Vol. II, pp. 111 and 112 (June, 1900), appeared a description of *Rhadinocladia*, a new genus of brown algae. Because of the scarcity of specimens no formal attempt was made to present all its generic characters. The discovery of additional material, including at least one undescribed species, makes an effort in this direction seem more promising at the present time.

Rhadinocladia, Schuh.

Small plants, often growing in loose tufts. Basal layer several cells in thickness except near the edges, adhering closely to the substratum and originating one to eight branching fronds, which possess a well-defined central axis one or more cells in width. Axis bearing numerous long and slender branches, with many or few ramuli and occasional hairs. Plurilocular sporangia cylindrical or oblong, sessile, abundant and entirely superficial. A variable genus allied to *Desmotrichum*.

1. R. Farlowii Schuh (l. c.) Basal layer mostly producing but one plant. Central axis apparent, usually of several series of cells except at the narrower base; branches given off at acute angles, long and flagellate, cells mostly uniseriate, ramuli few and rather short. About 16 mm. high. Fruit bluntish, elliptical-oblong, scattered, 20–25 μ wide, 70–85 μ long.

In summer on *Chorda* in Vineyard Sound, Massachusetts and on *Zostera* in Narragansett Bay, Bristol, Rhode Island.

2. R. **cylindrica**, n. sp. Axis usually monosiphonous occasionally with binate cells, with slender divaricate branches bearing numerous patent ramuli. About 3–8 mm. high, ordinarily producing several thalli from the same basal layer. Plurilocular sporangia very densely clustered along the axis and branches, their bases much compressed by crowding, very long cylindrical, with rounded tip. Size 60–80 × 15–18 μ.

Always on *Zostera*, in midsummer and autumn, in Bristol Harbor, Rhode Island.

South Braintree, Massachusetts.

THE HERBARIA OF NEW ENGLAND.

Mary A. Day.

(Continued from page 208).

Collins, James Franklin, Providence, Rhode Island. — Mr. Collins' herbarium, which is chiefly local, was commenced in 1884 and contains about 4700 mounted specimens, including nearly 2000 species of the flowering plants and ferns, and 1600 mosses; also about 2300 unmounted and mostly unnamed mosses.

Conant, Woodbury P., Salem, Massachusetts. — The collection of Mr. Conant contains the *Cyperaceae*, *Gramineae*, and *Filices* of North America, and the *Juncaceae* of New England. Mr. Conant has made a specialty of the *Cyperaceae* and *Gramineae* and has most of the North American species of these groups.

Connecticut Agricultural Experiment Station, New Haven, Connecticut. — Mr. Oscar D. Allen, formerly an instructor at Yale University laid the foundation for this collection, which was continued and enlarged by his son, John Alpheus Allen, who sold his private herbarium to the Station in 1885. This consisted of his collections in Connecticut, Maine, and southern Labrador. The herbarium now numbers about 5000 specimens, and is specially rich in *Saxifraga* and *Salix*, including 69 species and varieties of the latter from the herbarium of Michael Schuck Bebb, the well-known Salicologist; also in *Cyperaceae* from all parts of the world. The Station also possesses a small mycological collection and many of the principal sets of fungi. The herbarium is in charge of Dr. W. C. Sturgis.

Cummings, Clara Emma, Wellesley, Massachusetts. — The herbarium of Miss Cummings consists of about 4000 specimens of lichens and including Decades of North American Lichens distributed by C. E. Cummings, T. A. Williams, and A. B. Seymour; also Lichenes Boreali-Americani, some specimens from Calkins, some from Arnold, and the set from the Harriman Alaskan Expedition. Miss Cummings has sold her collection of mosses to Dr. G. G. Kennedy.

Cutler, Manasseh. — Rev. Manasseh Cutler, the earliest New England writer upon systematic botany, had a large collection of plants both from New England and Ohio, but these were all destroyed by fire.

Dame, Lorin Low, Medford, Massachusetts.— Mr. Dames' collection is specially devoted to the trees of New England; he also has most of the shrubs. His herbarium contains many specimens of the same species showing variations.

Dartmouth College, Hanover, New Hampshire.— This herbarium contains 40000 sheets of phaenogams, foreign species as well as American being represented. It is specially strong in tropical ferns but weak in local flora. It includes the herbaria of Professors Charles Henry Hitchcock and Henry Griswold Jesup. The latter of 3000 or 4000 sheets contains many of Lesquereux' mosses, of Sullivant's hepatics, and of Tuckerman's lichens. The herbarium is in charge of Mr. George R. Lyman.

Davenport, George Edward, Medford, Massachusetts.— In 1875 Mr. Davenport gave his herbarium then containing 116 species of ferns to the Massachusetts Horticultural Society of Boston. In May, 1900, it comprised about 700 sheets containing nearly 3200 specimens representing all genera and species of American pteridophyta north of Mexico. It is especially rich in *Cheilanthes* and *Botrychium* — the *ternatum* group of the latter genus alone being represented by some 200 specimens.

Deane, Walter, Cambridge, Massachusetts. — Mr. Deane's herbarium was started in 1880 and now contains over 36000 sheets. The geographical limit is that of Gray's Manual and the botanical limit the phaenogams and vascular cryptogams. In its early years many American plants outside the Manual region were included but none are incorporated now, also probably one thousand European specimens many of which are plants which have been introduced into America. Many specialists have worked over the plants of their own groups; the 2800 sheets of *Carex*, coming from all parts of North America, having been examined by Professor L. H. Bailey; the *Juncí* by Dr. George Engelmann; the genus *Salix* by Mr. M. S. Bebb; the *Umbelliferae* by Drs. Coulter & Rose; the genus *Vitis* by Professor L. H. Bailey; and many miscellaneous plants have been determined by Dr. Gray and Dr. Watson. The Potamogetons, about 700 specimens also from all parts of North America, are unmounted in order to show venation, and until his death were all determined by Dr. Morong who contributed duplicates of nearly all his own material to Mr. Deane's herbarium. Many of the grasses have been examined by Messrs.

Vasey and Scribner. In some genera Mr. Deane has made dissections of the flowers and mounted the parts, either in pockets or on the sheets with the specimens. The genus *Pontederia* is represented in all its forms from the very young stage to late fruiting.

Dewey, Chester. — The Carices belonging to Dr. Dewey and forming his working collection, are now at Bates College, Lewiston, Maine, having been included in President Chadbourne's herbarium, which was purchased for this college.

Eames, Edwin H., Bridgeport, Connecticut. — Dr. Eames has accumulated, during the last eleven years, by collecting and exchange work, an herbarium of about 8500 specimens of phaenogams and vascular cryptogams, including about 4200 species. The area represented is eastern North America, including those states crossed by the 100th meridian.

Eaton, Alvah A., Seabrook, New Hampshire. — Mr. Eaton's herbarium, containing about 2800 specimens (of which 2600 are from the United States and 200 from Europe) consists of phaenogams and vascular cryptogams. The pteridophyta of the United States are well represented, especially the genera *Equisetum* and *Isoëtes*.

Eaton, Daniel Cady, see Yale University.

Eggleston, Willard Webster, Rutland, Vermont. — In 1886, while a student at Dartmouth College, Mr. Eggleston commenced his herbarium. It now contains about 25000 specimens, including some 5000 species. It was commenced with the idea of representing the flora of the region covered by Gray's Manual, but has extended west and south over the United States. It is specially rich in New England plants, Vermont and the White Mountains having the best representation. Mr. Eggleston has attempted to show geographical distribution and many of rarer plants are represented from several stations. Among the New England plants which have been collected in the largest numbers are the *Gramineae*, the genera *Astragalus*, *Crataegus*, *Amelanchier*, *Rubus*, *Aster*, *Solidago*, *Carex*, *Pycnanthemum*, *Scirpus*, *Eleocharis*, and *Potamogeton*. This herbarium contains much of the material upon which the recently published Flora of Vermont, by Messrs. Brainerd, Jones and Eggleston was based.

Essex County Natural History Society, see Peabody Academy of Science.

Essex Institute, see Peabody Academy of Science.

Fairbanks museum of Natural Science, St. Johnsbury, Vermont. — The nucleus of this herbarium was the collection of plants of Dr. A. Blanchard, of Peacham, Vermont, numbering about 2500 sheets, which was purchased in 1889 and placed in the museum building when it was built in 1891. Since then it has been increased by collections of some of the Vermont botanists and now contains about 5100 sheets of phaenogams and cryptogams from both Europe and America.

Faxon, Charles Edward, Jamaica Plain, Massachusetts. — This herbarium, accumulated by Mr. Faxon and his brother, the late Edwin Faxon, consists almost entirely of New England plants, and contains about 4000 species, and at least 5000 sheets, representing all groups except fungi. It is mounted in folios. Among the specialists who have critically examined and named many of the plants, were Dr. Asa Gray, Mr. M. S. Bebb, and Dr. Geo. Engelmann. In 1898 Mr. Faxon presented to the Gray Herbarium more than eleven thousand duplicates collected by his brother and himself. Of these the bryophytes and thallophytes have since been deposited in the Cryptogamic Herbarium of Harvard University.

Fernald, Merritt Lyndon, Cambridge, Massachusetts.— Mr. Fernald began his collection in 1887, and it now numbers not less than 20000 sheets, which are mostly unmounted. The plants, chiefly phaenogams and vascular cryptogams, are arranged in systematic order and are strictly confined to the flora of Maine. The localities chiefly represented are Aroostook, Penobscot, Piscataquis, and York Counties, with portions of Somerset, Lincoln, Hancock and Franklin Counties. This is the most complete representation in existence of the vascular plants of Maine.

(*To be continued.*)

Vol. 3, No. 31, including pages 191 to 208 and plate 33, was issued 12 July, 1901.

R. S. Smith del.

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Almost immediately upon leaving Oldtown, the home of the Penobscot Indians, one feels that he is in the woods, and every minute of the ride will make him impatient to stop the train for the tantalizing plants which flash by in the clearings or by the streams. In fact, the true botanist will inevitably moralize to himself on the desirability of through vestibuled trains and parlor cars, and he may decide to take the freight train at the next station.

If he has spent hours about home searching for something really new to him, he will start with delight as he sees the fields and banks of blue *Aster Lindleyanus* just above Oldtown, or the clearings crimson in September with the drooping tassels of *Polygonum Careyi.* Or, if he is fortunate enough to get off in May, he will be greeted from recent clearings by fragrant white masses of Sweet Coltsfoot, *Petasites.*

Just beyond Alton, he cannot help longing to explore the indefinite miles of Sphagnum swamp, and if he looks to the West, he will see a beautiful little round pond bordered by gnarled Black Spruces, which he instantly knows must be covered with the tiny Mistletoe, *Arceuthobium pusillum.* Alton bog is well worth exploring, but it is only a small area compared with the hundreds of miles of such country through North-central Maine, and unless one has plenty of time he should save that and his enthusiasm for "farthest north."

If one is bound for Moosehead Lake he will follow the Piscataquis River, where, along the banks, or in the neighboring woods and swamps, he will find at different seasons many good things, among them *Anemone riparia, Epilobium palustre, Erigeron hyssopifolius, Antennaria petaloidea, Senecio Balsamitae, Vaccinium caespitosum, Pyrola asarifolia, Primula mistassinica, Calypso, Allium Schoenoprasum, Carex deflexa* and *Lycopodium sabinaefolium.*

If he wants the rare **CALAMAGROSTIS NEMORALIS** he should visit the Chocorua-like peak of Boarstone Mt., on Lake Onawa (reached from Monson).

When he reaches Moosehead and Mt. Kineo he will naturally want to

get **CAREX PORTERI**, *C. saxatilis*, var. *miliaris*, and *C. Grahami* from the gravelly shores or low woods; and on Kineo he will look for *Draba incana*, var. *arabisans*, *Primula farinosa*, *Shepherdia canadensis*, *Carex capillaris*, and *Aspidium fragrans*.

In the Katahdin Iron Works region, too, the botanist will be very happy, but the great botanizing begins as he approaches southern Aroostook County. From the main line of the railroad beyond the Katahdin Iron Works district one has some splendid views of Mt. Katahdin itself with the neighboring masses of Sordnahunk and Traveller Mts. If one does not make up his mind at once to explore the giant amphitheatres and castellated ridges of Katahdin, he is no true lover of the best of botanical exploring and of inspiring mountain life. (For detailed account of Katahdin and its flora, as far as known, see RHODORA for June, 1901.)

At Crystal flag-station one should stop long enough to explore a bit of the great bog which furnishes the upper waters of Molunkus Stream. Following the railroad back half a mile he will find himself surrounded by masses of *Betula pumila*, *Lonicera oblongifolia*, and other northern shrubs, with an herbaceous flora including *Parnassia caroliniana*, **DROSERA LINEARIS**, *Valeriana sylvatica*, *Aster junceus*, *Pyrola rotundifolia*, var. *uliginosa*, *Tojieldia glutinosa*, *Carex chordorhiza* and *C. livida*.

If he wishes to stop for some time in the region (and who does not) he can have good accommodations at Island Falls; and there, near the Mattawamkeag River, he will get the local **ANTENNARIA RUPICOLA**, *Hieracium vulgatum*, *Erigeron acris*, and *Halenia deflexa*. In the river, itself, and in Mattawamkeag Lake he will revel in September, dragging up such prizes as *Myriophyllum Farwellii*, *M. alterniflorum*, and *Potamogeton obtusifolius*.

When Houlton is reached one should make up his mind to stop at some of the numerous villages between there and the Aroostook River, for the Cedar (Arbor-vitae) swamps of the Meduxnakeag and the Presque Isle valleys are the homes of *Cypripedium spectabile*, *Microstylis monophyllos*, *Carex vaginata*, and scores of other species of absorbing interest.

The valleys of the Aroostook and the main St. John — for instance at Fort Fairfield, Van Buren, Fort Kent, and St. Francis — furnish one of the most striking floras of New England. There among other species one will get **THALICTRUM CONFINE** and **T. OCCIDENTALE**, **OXYTROPIS CAMPESTRIS**, var. **JOHANNENSIS**, *Hedysarum boreale*, **TANACETUM HURONENSE**, **PRENANTHES RACEMOSA** and **P. MAINENSIS**, *Gentiana Amarella*, var. *acuta*, **PEDICULARIS FURBISHIAE**, **SALIX GLAUCOPHYLLA** and **S. ADENOPHYLLA**, **GOODYERA MENZIESII**, *Juncus alpinus*, var. *insignis* and **J. TENUIS**, var. **WILLIAMSII**, *Triglochin palustre*, *Scirpus Clintonii*, **CAREX CRAWEI** and **C. BICOLOR**, *Equisetum palustre* and *E. variegatum*, and *Lycopodium sitchense*.

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